RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/573,764 Source: 1FWP.	
Date Processed by STIC: 4//7/06	

ENTERED



1.1

快快

IFWP

RAW SEQUENCE LISTING DATE: 04/17/2006
PATENT APPLICATION: US/10/573,764 TIME: 12:18:20

Input Set : A:\21421P.TXT

Output Set: N:\CRF4\04172006\J573764.raw

```
4 <110> APPLICANT: Xia, Menghang
             Williams, Mark E.
      7 <120> TITLE OF INVENTION: Nucleic Acid Molecules Encoding Novel
             Human Low-Voltage Activated Calcium Channel Proteins,
      8
              Designated - Alpha 1I-1 and Alpha 1I-2, Encoded Proteins and
      q
              Methods of Use Thereof
     10
     12 <130> FILE REFERENCE: 21421P
C--> 14 <140> CURRENT APPLICATION NUMBER: US/10/573,764
C--> 15 <141> CURRENT FILING DATE: 2006-03-29
     17 <150> PRIOR APPLICATION NUMBER: 60/508,112
     18 <151> PRIOR FILING DATE: 2003-10-02
     20 <160> NUMBER OF SEQ ID NOS: 21
     22 <170> SOFTWARE: FastSEQ for Windows Version 4.0
     24 <210> SEQ ID NO: 1
     25 <211> LENGTH: 17
     26 <212> TYPE: DNA
     27 <213> ORGANISM: Human
     29 <400> SEQUENCE: 1
     30 cgtgcacgtc acgctag
                                                                           17
     32 <210> SEQ ID NO: 2
     33 <211> LENGTH: 21
     34 <212> TYPE: DNA
     35 <213> ORGANISM: Human
     37 <400> SEQUENCE: 2
                                                                           21
     38 gcacgtgcag tgcgatctta a
     40 <210> SEQ ID NO: 3
     41 <211> LENGTH: 23
     42 <212> TYPE: DNA
     43 <213> ORGANISM: Human
     45 <400> SEQUENCE: 3
                                                                           23
     46 gtgcgacgac atggactgcc tgt
     48 <210> SEQ ID NO: 4
     49 <211> LENGTH: 24
     50 <212> TYPE: DNA
     51 <213> ORGANISM: Human
     53 <400> SEQUENCE: 4
     54 ggctgacagg ttgatgttct gaag
                                                                           24
     56 <210> SEQ ID NO: 5
     57 <211> LENGTH: 21
     58 <212> TYPE: DNA
     59 <213> ORGANISM: Human
     61 <400> SEQUENCE: 5
                                                                           21
     62 caatccccat gacccccaat g
```

Input Set : A:\21421P.TXT

Output Set: N:\CRF4\04172006\J573764.raw

```
64 <210> SEQ ID NO: 6
65 <211> LENGTH: 21
66 <212> TYPE: DNA
67 <213> ORGANISM: Human
69 <400> SEQUENCE: 6
                                                                       21
70 gatgggcttg agggaggaga t
72 <210> SEO ID NO: 7
73 <211> LENGTH: 21
74 <212> TYPE: DNA
75 <213> ORGANISM: Human
77 <400> SEQUENCE: 7
                                                                       21
78 gtgggcgaga tgacattgaa g
80 <210> SEQ ID NO: 8
81 <211> LENGTH: 20
82 <212> TYPE: DNA
83 <213> ORGANISM: Human
85 <400> SEQUENCE: 8
                                                                       20
86 cccgtggaga cctggaagag
88 <210> SEQ ID NO: 9
89 <211> LENGTH: 21
90 <212> TYPE: DNA
91 <213> ORGANISM: Human
93 <400> SEQUENCE: 9
                                                                       21
94 tttgtgctgg aggctgtgct g
96 <210> SEQ ID NO: 10
97 <211> LENGTH: 21
98 <212> TYPE: DNA
99 <213> ORGANISM: Human
101 <400> SEQUENCE: 10
                                                                        21
102 acctctgtgt gcccgtgggt a
104 <210> SEQ ID NO: 11
105 <211> LENGTH: 18
106 <212> TYPE: DNA
107 <213> ORGANISM: Human
109 <400> SEQUENCE: 11
                                                                        18
110 cgccctccca cctccatt
112 <210> SEQ ID NO: 12
113 <211> LENGTH: 226
114 <212> TYPE: DNA
115 <213> ORGANISM: Human
117 <400> SEQUENCE: 12
118 gtgcgacgac atggactgcc tgtccgaccg ctgcaagatc ctgcaggtct ttgatgactt 60
119 catctttatc ttctttqcca tggagatggt gctcaagatg gtggccctgg ggatttttgg 120
120 caagaagtgc tacctcgggg acacatggaa ccgcctggat ttcttcatcg tcatggcagg 180
121 gatggtcgag tactccctgg accttcagaa catcaacctg tcagcc
123 <210> SEQ ID NO: 13
124 <211> LENGTH: 3693
125 <212> TYPE: DNA
```

126 <213> ORGANISM: Human

Input Set : A:\21421P.TXT

Output Set: N:\CRF4\04172006\J573764.raw

128 <400> SEQUENCE: 13 129 gcagageega ggcaggegag agaceggeet cageeeegeg eteceegeeg egetggtete 60 130 tecegggeae ttgeeceget geteggteee egeageacee gegeeceege eeeggeeegg 120 131 agegeegege teeegeeege egeeegeeea gageetegee gteeeteeag eeegeegeet 180 132 octoetecte eegecatgge eegggeeece gggeeegeeg eeeceegeee geegeeecee 240 133 gcgccccggg ggctcagctg atcctgaatt ggcggggggt cggctggcgg ggctgggggt 300 134 ecetetegat egeeggette gggtggggae gegttgteee egegteteta acetggaega 360 135 ccccccgcgg ccgggccacg tccatgccaa gggctcccag ctcagtgtgg acatggctga 420 136 gagegeetee eegeeeteet catetgeage ageeeeagee getgageeag gagteaeeae 480 137 ggagcagece ggaeceegga geeceecate eteceegeea ggeetggagg ageetetgga 540 138 tggagetgat ceteatgtee cacacecaga cetggegeet attgeettet tetgeetgeg 600 139 acagaccacc agcccccgga actggtgcat caagatggtg tgcaacccgt ggtttgaatg 660 140 tgtcagcatg ctggtgatcc tgctgaactg cgtgacactt ggcatgtacc agccgtgcga 720 141 cgacatggac tgcctgtccg accgctgcaa gatcctgcag gtctttgatg acttcatctt 780 142 tatcttcttt gccatggaga tggtgctcaa gatggtggcc ctggggattt ttggcaagaa 840 143 gtgctacctc ggggacacat ggaaccgcct ggatttcttc atcgtcatgg cagggatggt 900 144 egagtactee etggacette agaacateaa eetgteagee ateegeaceg tgegegteet 960 145 gaggcccctc aaagccatca accgcgtgcc caacaagggg atgtggcctt gcccccatac 1020 146 taccageogg aggaggatga tgagatgece tteatetget.ceetgteggg egacaatggg 1080. 147 ataatgáget gecatgagat dececegete aaggageagg geegtgagtg etgeetigtee 1140 148 aaggacgacg tetacgaett tggggegggg egecaggaee teaatgeeag eggeetetgt 1200 149 gtcaactgga accgttacta caatgtgtgc cgcacgggca gcgccaaccc ccacaagggt 1260 150 gccatcaact ttgacaacat cggttatgct tggattgtca tcttccaggt gatcactctg 1320 151 gaaggetggg tggagateat gtactacgtg atggatgete acteetteta caactteate 1380 152 tacttcatcc tgcttatcat agtgggctcc ttcttcatga tcaacctgtg cctcgttgtc 1440 153 atagegacee agttetegga gaceaageaa egggageace ggetgatget ggageagegg 1500 154 cagegetace tgteetecag caeggtggee agetacgeeg ageetggega etgetacgag 1560 155 gagatettee agtatgtetg ceacateetg egeaaggeea agegeegege cetgggeete 1620 156 taccaggece tgcagagecg gegecaggee etgggecegg aggeceegge eecegecaaa 1680 157 cctgggcccc acgccaagga gccccggcac taccagctgt gcccgcaaca tagccccctg 1740 158 gatgegaege eccaeaceet ggtgeageee ateccegeea egetggette egateeegee 1800 159 agetgeeett getgeeagea tgaggaegge eggeggeeet egggeetggg eageaeegae 1860 160 tegggeeagg agggeteggg eteegggage teegetggtg gegaggaega ggeggatggg 1920 161 gacggggccc ggagcagcga ggacggagcc tcctcagaac tggggaagga ggaggaggag 1980 162 gaggagcagg cggatggggc ggtctggctg tgcggggatg tgtggcggga gacgcgagcc 2040 163 aagctgegeg geategtgga cageaagtae tteaaceggg geateatgat ggeeatectg 2100 164 gtcaacaccg tcagcatggg catcgagcac cacgagcagc cggaggagct gaccaacatc 2160 165 ctggagatct gcaatgtggt cttcaccage atgtttgccc tggagatgat cctgaagctg 2220 166 gctgcatttg ggctcttcga ctacctgcgt aacccctaca acatcttcga cagcatcatt 2280 167 gtcatcatca ggcctcctac tgctgcctcc tacctgtacc ctgggcctgc cctgcgggac 2340 168 cgcagcatct gggagatcgt ggggcaggcg gacggtgggc tgtcggttgct gcggaccttc 2400 169 eggetgetge gegtgetgaa actggtgege tteatgeetg eeetgeggeg ceagetegtg 2460 170 gtgctcatga agaccatgga caacgtggcc accttctgca tgctgctcat gctcttcatc 2520 171 ttcatcttca gcatccttgg gatgcatatt tttggctgca agttcagcct ccgcacggac 2580 172 actggagaca cggtgcccga caggaagaac ttcgactccc tgctgtgggc catcgtcact 2640 173 gtgttccaga tcctcaccca ggaggactgg aacgtcgttc tctacaatgg catggcctcc 2700 174 acttetecet gggeeteeet etaetttgte geeeteatga eetteggeaa etatgtgete 2760 175 ttcaacctgc tggtggccat cctggtggag ggcttccagg cggagggtga cgccaatcgc 2820 176 tectaetegg acgaggacca gageteatee aacatagaag agtttgataa getecaggaa 2880

Input Set : A:\21421P.TXT

Output Set: N:\CRF4\04172006\J573764.raw

```
177 ggcctggaca gcagcggaga tcccaagctc tgcccaatcc ccatgacccc caatgggcac 2940
178 ctggacccca gtctcccact gggtgggcac ctaggtcctg ctggggctgc gggacctgcc 3000
179 ccccgactct cactgcagcc ggaccccatg ctggtggccc tgggctcccg aaagagcagc 3060
180 gtcatgtctc tagggaggat gagctatgac cagcgctccc tgtccagctc ceggagctcc 3120
181 tactacgggc catggggccg cagcgcggcc tgggccagcc gtcgctccag ctggaacagc 3180
182 ctcaagcaca ageegeegte ggeggageat gagteeetge tetetgegga gegeggegge 3240
183 ggcgcccggg tetgcgaggt tgccgcggac gaggggccgc cgcgggccgc acccctgcac 3300
184 accccacacg cccaccacgt tcatcacggg ccccatctgg cgcaccgcca ccgccaccac 3360
185 cgccggacgc tgtccctcga caacagggac tcggtggacc tggccgagct ggtgcccgcg 3420
186 qtqqqqqccc accccqqqqc cgcctqgagq gcgqcagqcc cggcccccgg gcatgaggac 3480
187 tgcaatggca ggatgcccag catcgccaaa gacgtcttca ccaagatggg cgaccgcggg 3540
188 gatcgcgggg aggatgagga ggaaatcgac tacaccctgt gcttccgcgt ccgcaagatg 3600
189 atcgacgtct ataagcccga ctggtgcgag gtccgcgaag actggtctgt ctacctcttc 3660
190 tctcccgaga acaggttccg ggtcctgtgt cag
                                                                      3693
192 <210> SEQ ID NO: 14
193 <211> LENGTH: 3751
194 <212> TYPE: DNA
195 <213> ORGANISM: Human
197 <400> SEQUENCE: 14 ···
198 egteceteca geoegeegee teeteeteet eeegeeatgy,eeegggeeee egggeeegee 60 
m c
199 gcccccgcc cgccgccccc cgcgccccgg gggctcagct gatcctgaat tggcgggggg 120
200 teggetggeg gggetggggg teeetetega tegeeggett egggtgggga egegttgtee 180
201 ccgcgtctct aacctggacg accccccgcg gccgggccac gtccatgcca agggctccca 240
202 geteagtgtg gacatggetg agagegeete eeegeeetee teatetgeag cageeceage 300
203 egetgageca ggagteacea eggageagee eggacecegg agecececat ceteceegee 360
204 aggeetggag gageetetgg atggagetga teeteatgte eeacacecag acetggegee 420
205 tattgccttc ttctgcctgc gacagaccac cagcccccgg aactggtgca tcaagatggt 480
206 gtgcaacccg tggtttgaat gtgtcagcat gctggtgatc ctgctgaact gcgtgacact 540
207 tggcatgtac cageegtgeg aegacatgga etgeetgtee gaeegetgea agateetgea 600
208 ggtctttgat gacttcatct ttatcttctt tgccatggag atggtgctca agatggtggc 660
209 cctggggatt tttggcaaga agtgctacct cggggacaca tggaaccgcc tggatttctt 720
210 categteatg geagggatgg tegagtaete cetggaeett cagaacatea acetgteage 780
211 cateegeace gtgegegtee tgaggeeeet caaageeate aacegegtge ceagtatgeg 840
212 gatectggtg aacetgetee tggacacact geceatgetg gggaatgtee tgetgetetg 900
213 cttctttgtc ttcttcatct ttggcatcat aggtgtgcag ctctgggcgg gcctgctgcg 960
214 taaccgctgc ttcctggagg agaacttcac catacaaggg gatgtggcct tgcccccata 1020
215 ctaccagccg gaggaggatg atgagatgcc cttcatctgc tccctgtcgg gcgacaatgg 1080
216 gataatgggc tgccatgaga tccccccgct caaggagcag ggccgtgagt gctgcctgtc 1140
217 caaggacgac gtctacgact ttggggcggg gcgccaggac ctcaatgcca gcggcctctg 1200
218 tgtcaactgg aaccgttact acaatgtgtg ccgcacgggc agcgccaacc cccacaaggg 1260
219 tgccatcaac tttgacaaca tcggttatgc ttggattgtc atcttccagg tgatcactct 1320
220 ggaaggetgg gtggagatea tgtactaegt gatggatget cacteettet acaactteat 1380
221 ctacttcatc ctgcttatca tagtgggctc cttcttcatg atcaacctgt gcctcgttgt 1440
222 catagogaco cagttotogg agacoaagoa acgggagoac cggotgatgo tggagoagog 1500
223 gcagcgctac ctgtcctcca gcacggtggc cagctacgcc gagcctggcg actgctacga 1560
224 ggagatette cagtatgtet gecacateet gegeaaggee aagegeegeg eeetgggeet 1620
225 ctaccaggec ctgcagagec ggcgccagge cetgggcccg gaggccccgg cccccgccaa 1680
226 acctgggccc cacgccaagg agccccggca ctaccagctg tgcccgcaac atagccccct 1740
227 ggatgcgacg ccccacaccc tggtgcagcc catccccgcc acgctggctt ccgatcccgc 1800
```

Input Set : A:\21421P.TXT

Output Set: N:\CRF4\04172006\J573764.raw

```
228 cagetgeect tgetgeeage atgaggaegg eeggeggeec tegggeetgg geageacega 1860
229 ctcgggccag gagggctcgg gctccgggag ctccgctggt ggcgaggacg aggcggatgg 1920
230 ggacggggcc cggagcagcg aggacggagc ctcctcagaa ctggggaagg aggaggagga 1980
231 ggaggagcag geggatgggg eggtetgget gtgeggggat gtgtggeggg agaegegage 2040
232 caagetgege ggeategtgg acageaagta etteaacegg ggeateatga tggeeateet 2100
233 ggtcaacacc gtcagcatgg gcatcgagca ccacgagcag ccggaggagc tgaccaacat 2160
234 cctggagatc tgcaatgtgg tcttcaccag catgtttgcc ctggagatga tcctgaagct 2220
235 ggctgcattt gggctcttcg actacctgcg taacccctac aacatcttcg acagcatcat 2280
236 tgtcatcatc agcatctggg agatcgtggg gcaggcggac ggtgggctgt cggtgctgcg 2340
237 qacetteeqq etqetqegeq tgetqaaact ggtgegette atgeetgeec tgeggegeca 2400
238 getegtggtg etcatgaaga ecatggacaa egtggecace ttetgeatge tgeteatget 2460
239 cttcatcttc atcttcagca tccttgggat gcatattttt ggctgcaagt tcagcctccg 2520
240 cacggacact ggagacacgg tgcccgacag gaagaacttc gactccctgc tgtgggccat 2580
241 cgtcactgtg ttccagatcc tcacccagga ggactggaac gtcgttctct acaatggcat 2640
242 ggcctccact tctccctggg cctccctcta ctttgtcgcc ctcatgacct tcggcaacta 2700
243 tgtgctcttc aacctgctgg tggccatcct ggtggagggc ttccaggcgg agggtgacgc 2760
244 caatcgctcc tactcggacg aggaccagag ctcatccaac atagaagagt ttgataagct 2820
245 ccaggaagge ctggacagca gcggagatee caagetetge ccaateeeca tgaceeccaa 2880
246 tgggcacetg gaccccagte teccaetggg tgggcadota ggteetgetg gggetgeggg 29404
.247 acctgcccc cgactctcac tgcagccgga coccatgctg gtggccctgg gctcccgaaa 3000像書子
 248 gagcagcgtc atgtctctag ggaggatgag ctatgaccag cgctccctgt ccagctcccg 3060
249 gagetectae taegggeeat ggggeegeag egeggeetgg geeageegte getecagetg 3120
250 gaacageete aageacaage egeegtegge ggageatgag teeetgetet etgeggageg 3180
251 cggcggcggc gcccgggtct gcgaggttgc cgcggacgag gggccgccgc gggccgcacc 3240
252 cetgeacace ceacacgeec accaegttea teaegggeec catetggege accgecaceg 3300
253 ccaccaccgc cggacgctgt ccctcgacaa cagggactcg gtggacctgg ccgagctggt 3360
254 gcccgcggtg ggcgcccacc cccgggccgc ctggagggcg gcaggcccgg cccccgggca 3420
 255 tgaggactgc aatggcagga tgcccagcat cgccaaagac gtcttcacca agatgggcga 3480
 256 ccgcggggat cgcggggagg atgaggagga aatcgactac accctgtgct tccgcgtccg 3540
 257 caagatgate gaegtetata ageeegaetg gtgegaggte egegaagaet ggtetgteta 3600
 258 cctcttctct cccgagaaca ggttccgggt cctgtgtcag accattattg cccacaaact 3660
 259 cttcgactac gtcgtcctgg ccttcatctt tctcaactgc atcaccatcg ccctggagcg 3720
 260 gcctcagatc gaggccggca gcaccgaacg c
 262 <210> SEQ ID NO: 15
 263 <211> LENGTH: 1205
 264 <212> TYPE: DNA
 265 <213> ORGANISM: Human
 267 <400> SEQUENCE: 15
 268 caatccccat gacccccaat gggcacctgg accccagtct cccactgggt gggcacctag 60
 269 gtcctgctgg ggctgcggga cctgccccc gactctcact gcagccggac cccatgctgg 120
 270 tggccctggg ctcccgaaag agcagcgtca tgtctctagg gaggatgagc tatgaccagc 180
 271 geteeetgte eageteeegg ageteetaet aegggeeatg gggeegeage geggeetggg 240
 272 ccagccgtcg ctccagctgg aacagcctca agcacaagcc gccgtcggcg gagcatgagt 300
 273 ccctgctctc tgcggagcgc ggcggcggcg cccgggtctg cgaggttgcc gcggacgagg 360
 274 ggccgccgcg ggccgcaccc ctgcacaccc cacacgccca ccacgttcat cacgggcccc 420
 275 atctggcgca ccgccaccgc caccaccgcc ggacgctgtc cctcgacaac agggactcgg 480
 276 tggacctggc cgagctggtg cccgcggtgg gcgcccaccc ccgggccgcc tggagggcgg 540
 277 caggecegge eecegggeat gaggaetgea atggeaggat geceageate gecaaagaeg 600
 278 tetteaceaa gatgggegae egeggggate geggggagga tgaggaggaa ategaetaea 660
```

VERIFICATION SUMMARY

DATE: 04/17/2006

PATENT APPLICATION: US/10/573,764

TIME: 12:18:21

Input Set : A:\21421P.TXT

Output Set: N:\CRF4\04172006\J573764.raw

L:14 M:270 C: Current Application Number differs, Replaced Current Application Number L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date